

INTRODUCTION TO THE DEPARTMENT OF COMMERCE GUIDANCE ON IT ARCHITECTURES

The Department of Commerce Chief Information Officer (CIO) Council has issued a requirement that all bureaus submit their Information Technology (IT) Architectures or Architecture plans to the Department of Commerce IT Architecture Affinity Group for review by October 1, 1999. All bureaus are required to have their Architecture(s) approved by the Affinity Group by June 1, 2000. The Affinity Group has prepared guidance to assist the bureaus in knowing how their Architectures will be evaluated and to assist them in the preparation of their Architectures.

The origin of the IT Architecture requirement lies in the Information Technology Management Reform Act of 1996 (the Clinger-Cohen Act), which requires that the Chief Information Officer of an executive agency be responsible for “developing, maintaining, and facilitating the implementation of a sound and integrated information technology architecture for the executive agency.” Between the Act and other OMB regulations, agencies are also required to institute and use a capital planning and investment analysis process and to develop both a Strategic IT Plan and an Operational IT Plan. An IT Architecture is related to and will be reflected in these other requirements.

The purpose of the Strategic IT Plan is to describe in general terms how IT will be used to support the key program missions and goals defined in the organization’s Strategic Plan. The purpose of the Operational IT Plan is to provide a more detailed description of IT actions and investments planned and to support an investment analysis of these plans. These documents will need to reflect the Architectural changes the organization plans to make. The Strategic IT Plan might be used to define a “Target Architecture”, while the Operational IT Plan might detail the implementation steps currently planned. As for the capital planning and investment process, proposed investments that do not fit into an Architecture will usually receive low ratings. The “Raines Rules” used by OMB to review proposed investments specifically asks about conformance with bureau architectures.

One difficulty in working on IT Architectures is developing a common understanding of what that term actually means. The guidance provided describes and reflects the understanding that will be used to evaluate bureau efforts. For the Department of Commerce, an IT Architecture is being defined as the development, implementation, maintenance, and use of a “blueprint” that explains and guides how an organization’s IT and information management elements work together to accomplish the mission of the organization. The blueprint must take into account the organizations’ business functions, information and work flow, and a number of other aspects of the organization – it cannot be a set of technical decisions made in isolation from those other elements.

The Affinity Group has prepared three pieces of guidance to assist the bureaus in their Architecture efforts, and offers two other forms of assistance. These are:

- ***Information Technology Architecture: What is it, Why Should You Care, and How Do You Do One?*** This document is a “plain language” overview of the purpose of an IT Architecture and how one can be developed. Its objective is to assist both managers and technical personnel in having a shared understanding the basics of the architecture process.
- ***Department of Commerce Information Technology Architecture Elements–Guidance List.*** This document supplements the overview above by providing more detailed “cookbook” descriptions of how to execute the steps toward an Architecture.
- ***Evaluation Criteria for Meeting The Department of Commerce Information Technology Architecture Requirements.*** This document gives the evaluation criteria against which bureau IT Architecture efforts and status will be measured and against which individual IT Architectures will be evaluated. An IT Architecture Development Checklist and selected definitions are also provided. A bureau or organization should review the checklist before and after documenting its Architecture to ensure that it has included all of the necessary elements.
- **Sample IT Architecture Documents.** Many people would like to see examples of what other organizations have done. The Affinity Group has prepared a collection of sample IT Architecture documents that the Affinity Group views as potential models for others to use. These documents are housed in the Department of Commerce Library, IT Architecture section. Others can be found on-line through links on the Affinity Group’s Home Page (<http://www.hpcc.noaa.gov/docita>).
- **Consultations.** The last form of guidance that the Affinity Group has to offer is “personal” consultation. Each DOC bureau is unique. Each IT Architecture will exhibit unique characteristics, and the Architecture requirement contains the flexibility to allow organizations to use unique approaches to reflect these characteristics. The Affinity Group is available to review a bureau’s plans for developing or documenting an Architecture to ensure in advance that these plans will conform with the Department’s requirements. The Affinity group is also available to give advice on any other aspect of a bureau’s efforts that may be causing difficulty or uncertainty.

Except for the Evaluation Criteria, none of the other guidance is mandatory – bureaus are not required to use any specific approach or produce specific sets of documentation (although some form of documentation is required). The bureaus must decide what elements apply to their enterprise and what format of documentation will best suit their needs as a tool to guide their IT activities and to conduct capital planning and investment analyses.